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FCC
RE : ET Docket No. 04-37

The Commission, it appears, has finally decided that Access BPL will cause interference to the radio services that use HF radio frequencies. The latest NPRM is a step in the right direction, but is inadequate in its protection for many users of the HF radio spectrum. The Commission also fails to understand that there will be a negative economic impact on a number of companies that make HF radio equipment. It is hard to imagine that there will be anyone interested in trying to monitor HF radio when it is mostly covered with Access BPL interference. I am sure the Commission is aware of the popular quote, "the devil is in the details," and there are a number of critical issues the latest NPRM fails to address. Below is a short description of some of the "details" the latest NPRM fails to address.

1. Amateur radio operators expect zero interference from BPL systems. Many amateur radio operators are experimenting with low power HF communications, and any BPL interference will compromise their low power communications efforts. Also the amateur radio service will not accept any Access BPL interference that disrupts emergency communications.

2.The Commission has no knowledge about possible consequences of large-scale deployment of BPL technology. Before large-scale deployment takes place, nation wide, the FCC should permit only one large deployment to serve as a test bed. The results of this experiment can then be applied to future large-scale development. Mitigation methods can be tried, and their success or failure can be determined.

3. The Commission should recognize the fact that large-scale deployment of BPL will slow the development of fiber optic systems. Fiber optic cables can carry all Internet, telephone and cable television traffic through one cable with no possibility of causing interference to any radio service.

4. The most recent NPRM offers no protection to the short-wave listening community. The SWL community should receive the same protection as any other user of the HF radio spectrum. If not, then BPL companies should pay compensation to the short-wave listeners whose receivers are made useless by BPL interference.

5. There are several companies in the US that manufactures receivers for SWL use. These companies deserve compensation for the lost sales of their products. Two of these companies are Ten Tec and WinRadio.

6. Several foreign electronics companies like Icom, Yaesu, Telefunken, and Kenwood should be paid compensation due to the drop in sales as additional deployment of BPL takes place.

7. Numerous small companies in the US make devices like antennas and receiver preamps etc. that improve reception of HF radio signals. The need for their products will drop to zero as BPL pollutes the HF spectrum. These businesses include, Autec Research, MFJ Enterprises, and Universal Electronics, just to name a few, deserve compensation for the loss of sales in the US.

8. Rapid shut down of BPL systems should take place during a national emergency. BPL companies should demonstrate their rapid shut down capability to the FCC periodically. Potential customers should know that rapid shut down of BPL networks can and probably will take place during a national emergency. During a national emergency many HF frequencies may be needed. The frequencies required depend on the status of the earth's ionosphere at that time, and it is difficult to predict what frequencies will work best before a serious event takes place.

9. The latest NPRM says that BPL systems must accept interference from licensed radio services such as the amateur radio service. If serious problems of this nature develop, it should be the responsibility of the BPL provider service to explain to customers that the interference problem has to be fixed by the company, not by the interfering HF radio transmitter. BPL provider companies should be required to inform their patrons that interference from near by HF radio transmitters may at times disrupt service, and that the interference must be tolerated until the BPL company can find a fix for the problem.

10. The potential for interference from HF mobile units should be examined before large-scale development of BPL systems takes place. A HF mobile unit that is transmitting and passing through a large-scale BPL network could possibly disrupt service to many of the BPL users.

11. Some consideration should be given to Citizen Band HF radio operations. Even though CB radio is unlicensed they deserve some protection from Access BPL interference. It may become necessary to suspend the CB service because of BPL interference. Some compensation should be paid to CB operators whose equipment becomes useless due to BPL interference.

12. The Commission needs to find out if there is a security problem when using Access BPL for Internet connection. Wireless computer systems can easily be monitored. Recently a news reporter demonstrated how easy it is to drive around the Washington DC area, and read computer data from wireless computer networks inside US Government buildings. If there is a security problem with Access BPL, then the BPL provider should notify their customers of this situation so they can take action to upgrade their security.

13. There may be interference generated within a home or business because of poor or faulty internal wiring. In a case of this sort the home or business owner should be required to fix the problem so that nearby HF radio operators no longer receive BPL interference from a nearby home or business.

14. The Commission has suggested that BPL service providers must maintain accurate databases so that the source of BPL interference can be determined quickly. New rules and regulations within Part 15 of the FCC rules and regulations should support this concept. I must remind the Commission that rules and regulations mean nothing unless supported by penalties for violation.

15. In the future the International Telecommunications Union may grant new frequencies world wide for use by amateur radio operators. When and if this happens BPL operators must be required by regulation to provide additional protection to the new frequencies so that the new HF frequencies can be used in the US.

16. All US military communications on HF should receive protection from future BPL interference. This should be incorporated into the rules and regulations governing Access BPL operations.

17. Access BPL companies should be required to solve interference problems quickly. In the past electric utility companies have been very slow to correct line noise interference problems. Rules and regulations need to set in place before large scale BPL networks are up and running.

18. The FCC needs to recognize that BPL is a technology that creates RF pollution on the public airways and therefore should be closely regulated, as are all activities that create pollution.

19. If an amateur radio operator or other HF radio user moves to another location the BPL operators in the new area must stop any interference found at the new location.

20. The United States has signed international treaties that make it illegal to prevent its citizens from being able to monitor the HF broadcasting of other nations. Therefore it may be a violation of international agreements to prevent short wave listeners from being able to receive foreign broadcast stations in the HF radio spectrum. If BPL providers can and will prevent interference to the short wave broadcast frequencies there should be no problem.

21. The FCC uses the term “harmful interference” in several places in the latest NPRM. The Commission should realize the term harmful interference is a relative term depending on the mode and purpose of a particular communication. For example, PSK 31 is a low power mode (often 20 watts or less) and is therefore more susceptible to interference, than for example, foreign broadcast stations that normally run several thousand watts of power. Emergency communications should be interference free, since some emergency communications stations may have to operate with low power in order to conserve battery power during the emergency.

22. There are a large number of amateur radio stations (about 150,000) that use high gain antennas that are more likely to find BPL interference a problem as far as one mile from a BPL source. Also gain antennas increase the possibility that HF transmissions will disrupt Access BPL service. This problem needs to be tested and possibly verified prior to permitting large-scale implementation of BPL technology.

23. Persons, who for any reason, reject Access BPL service at their homes or business should not have to pay increased electric utility bills that may be used to cover the cost of installation and operation of BPL systems. The cost should be covered completely by those who want the service. The Commission should remember that there are many people, especially in urban areas, who have limited resources, due to lost jobs etc. who will find it difficult to pay a higher utility bill each month.

24. The FCC should be aware that there are a few HF broadcasters in the US that are broadcasting to citizens in this country. Their operating frequencies should remain free of BPL interference.

Conclusion: The FCC 's job is to protect all forms of communications from the interference that can occur between various types electromagnetic communications. The FCC should be fair and impartial with all parties that use HF radio spectrum. The Commission should avoid the temptation of supporting one spectrum user over another to prevent charges of unfair bias. Decisions should be made based on verifiable technical measurements with the understanding that emergency communications must receive the highest levels of protection. The FCC should recognize that the Amateur Radio Service is a key component in defense of the homeland during these difficult times. Last year the Dept. of Homeland Security and the American Radio Relay League (ARRL) signed agreements that make amateur radio a key element in defense of the nation. There are thousands of amateur radio stations that can use back up power in a major emergency. That is not the case for Access BPL networks. Access BPL will stop working when the main electrical power grid system breaks down due to natural or man made causes.

Sincerely,

Richard Nielsen
ARRL Member and Amateur Radio Operator